

Date: Friday, 10/20/2006 11:09:52 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
 Job Number : 29085
 Estimate Number : 10192
 P.O. Number : *NIA*
 This Issue : 10/20/2006 S.O. No. : *NIA*
 Prsht Rev. : *NC*
 First Issue : *NIA* Type : PURCHASED PARTS
 Previous Run : 27244
 Written By : *[Signature]*
 Checked & Approved By : *[Signature]* 06 10 20
 Comment : Est: F 01.11.29 Reformat SM/EC

Drawing Name : CLAMP

Part Number : D2171
 Drawing Number : D2171 REV. D
 Project Number : N/A
 Drawing Revision : D
 Material : *NIA*
 Due Date : 11/15/2006

Qty: 100 Um: Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: *2299*

Laser cut as per Dwg D2171

Material: 304/316 SS 0.063" thick

Material release note required

*Label 10/20**(100)*

2.0

D2171F

Clamp



Comment: Qty.: 1.0000 Each(s)/Unit Total : 100.0000 Each(s)
 CLAMP

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect for Transit Damage

Ensure Material Release Note is attached

*10/11/15**(100)*

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK
 (4.158" center to center)

06-11-17 100
QSA 009

(90)

5.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Deburr

2- Bend as per Dwg D2171


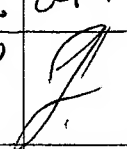
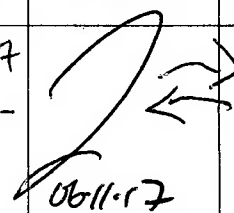
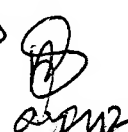

3- Tumble

Mr. *06-11-20*

(99)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2171 PAR #: N/A Fault Category: Supplier/GST NCR: (Yes) No DQA: (Yes) Date: 06/11/21
 QA: N/C Closed: (Yes) Date: 06/11/21

NCR: <u>29085</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06-11-17	4.0	Supplier made parts using .063 SS. 301, AMS 5516.		- Notify supplier, so next time the material will match the drawing. - Material is acceptable as per E-mail.	06/11/17 	 06/11/17		 06/11/17

NOTE: Date & initial all entries

Date: Friday, 10/20/2006 11:09:52 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CLAMP

Job Number: 29085

Part Number: D2171

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SB 06/11/20 99

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 57219

06/11/20 99

8.0

QC21

FINAL INSPECTION/W/O RELEASE



99

Comment: FINAL INSPECTION/W/O RELEASE

06/11/20

Job Completion



06/11/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

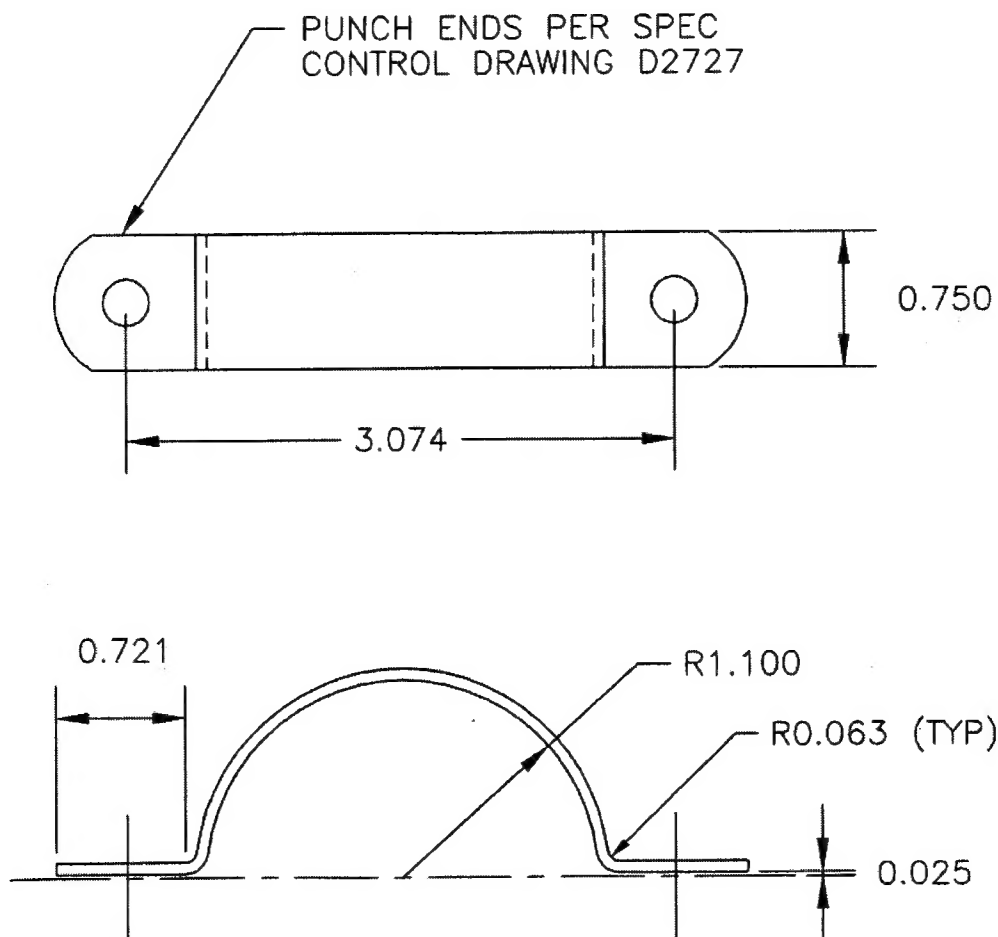
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN Bw	DRAWN BY DA	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED KE	DRAWING NO. D2171	REV. 0 SHEET 1 OF 1
DATE 99.03.08		TITLE CLAMP	SCALE 1:1
B	96.01.29	REDRAWN	
C	97.05.14	RADIUS CHANGED, CUSHION ADDED	
D	99.03.08	REMOVE CUSHION (TSR A890) 4.158 WAS 4.888	

RELEASED
99.03.11 KE



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 29085

MATERIAL: 304/316 SS 0.063 THICK
FLAT LENGTH: 4.968 END-END
4.158 HOLE-HOLE



1990

CERTIFICATE OF COMPLIANCE CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE
POINTE CLAIRE, QC
H9R 1A1

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7

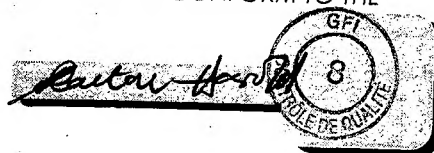
CERTIFICATE NO. <u>2</u>		OUR JOB NO. <u>J0151142</u>		SHIPPING MEMO <u>0350224</u>	
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME
<u>---</u>	<u>100 PCS</u>	<u>PO00062299</u>	<u>D21/1</u>	<u>D</u>	<u>CLAMP</u>
MATERIAL		SUPPLIED BY		MAT. REL. NO.	
<u>S.S.T 301</u>		<u>ROLLED ALLOYS / AK STEEL</u>		<u>H/N # 7360176 ATT'D</u>	
DWG ISSUE <u>D</u>					

	PROCESS	PROCESSOR	RELEASE NOTE #
1	FIRST ARTICLE INSPECTION REPORT ON FILE	GFI	CONFORMS
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3			
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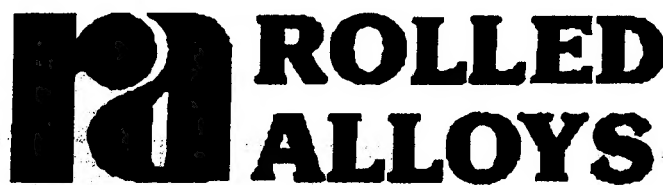
WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 14 NOVEMBER 2006

G.F.I. Q.C. REP.



528-06



Heat and Corrosion Resistant Alloy Specialists

2283 Argentia Road, Unit 6
Mississauga, Ontario CANADA L5N 5Z2
Phone: 905-363-0277 Fax: 905-363-0283

CERTIFICATE OF COMPLIANCE

Date: AUGUST 9, 2006

Sold to: GFI INC.

Ship to: 180 AVENUE LABROSSE
POINT CLAIRE, QC
H9R 1A1

PO: 60753

Material: .060/.066" THICK SHEET 301 SS 77 lbs.
1 PC 36"x 120"
.063" 302 ANN ✓
MIL S 5059

Heat: 7360176

Spec: AMS 5516
CANADAIR APPROVED SOURCE

This is to certify that the material furnished under the above purchase order meets all the requirements of the specification as specified on your purchase order.

Yours Faithfully,

H. Khan, P.Eng
Q.A. Manager

8/07/2006 11:11

613-860-6350

FERGUSON METALS

PAGE 09/17



AK Steel Corporation
Metallurgical Test Report
Coshocton Works
Coshocton, OH 43812

Page 1
 Load No. 7883163
 SYM No. 7883163

CUSTOMER	FERGUSON METALS INC. 3475 SYMMES ROAD HAMILTON, OH 42015	SHIP TO FERGUSON METALS INC FERGUSON METALS INC/AERO METAL PROCESSING DIVISION 3475 SYMMES ROAD HAMILTON, OH 45015	MILL ORDER NO. 271940-0533	PROCESSOR ORDER NO. 01008517	BUYERS ORDER NO. 01008517
			PART NO. 11156		
	ENGLISH UNITS -PRODUCT- METRIC UNITS J623 NOM 36.000 X COIL				

SKID ID	PIECE	HEAT	PARENT COIL ID	NET WEIGHT
SKID759479	1	7360176	0626183-02B	12,970 LBS. 5,883 KG.
TOTAL SKIDS	TOTAL PIECES			TOTAL NET WEIGHT
1	1			12,970 LBS. 5,883 KG.

L-Ladle Analysis of Heat P-Product Analysis of Parent Coil **CHEMICAL ANALYSIS**

ID	C	MN	P	S	SI	CR	MI	MO	N	CU						
L 7360176	.012	1.30	.025	.001	.45	18.24	8.61	.32	.037	.35						

SHIPPING DATE: 04/18/2006
 REMARKS: THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE U.S.A.
 NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS, RADIUM, ALPHA
 SOURCE, AND LOW MELTING ALLOYS OR ELEMENTS CAPABLE OF FORMING LOW MELTING
 ALLOYS WERE MADE THROUGHOUT THE PROCESSING OF THIS MATERIAL.
 COILED PRODUCTS CONTAIN NO WELDS
 MATERIAL MEETS REQUIREMENTS OF TYPES 304 & 304L FOR REFERENCED SPECIFICATIONS

PRODUCT DESCRIPTION

CR SHF TYPE 302/304/304L STAINLESS #2B FINISH SLIT EDGE * AMS 5513 H WITH AK STEEL DOCUMENTED EXCEPTIONS DATED 07/11/05 TO PARA
 GRAPHS * ASTM A 240 -04 EX PARA 3.1.9 ELONG WILL BE DETERMINED BY ASTM E 8 * AMS 5511 H WITH AK STEEL DOCUMENTED EXCEPTIONS DATE
 D 07/11/05 TO PARAGRAPHS * AMS 5516 H WITH AK STEEL DOCUMENTED EXCEPTIONS DATED 03/30/06 TO PARAGRAPHS-1.2, PRODUCT END USE; 2.6PE
 C. REVIEW AND CERTIFICATION; 3.4 * ASTM A 666 -03 * MILS-5059 D-AREND-3 * UNS-S30403 5TH EDITION * FMI-304L/304/302 ISSUE 7, 2/
 13/06 * ASME SA-240 SECTION II PART A (2004 ED, 2005 ADDENDA) EX PARA 3.1.7 DIMENSIONAL TOLS FROM ASME SA-480 2004 ED APPLY * ON
 E-S30400/S30200

PARENT COIL ID	POS (P/T)	DIR (L, T, D)	COND	% ELONG 1 INCH MEASURED	TENSILE STRENGTH (KSI)	Y.S. 1/2% OFFSET (KSI)	ROCKWELL HARDNESS Tail	ROCKWELL HARDNESS Front			
0626183-02B	7	T	A.S.T.M	58.6	83.2	37.6	B 78	B 80			


REVIEWED BY Q.C.
 Date 7/11/06 by [Signature]

*** CONTINUED ON NEXT PAGE ***

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2006 WED 11:37 FAX 905 363 0283 ROLLED ALLOYS --- GFI
 05/07/2006 11:11 513-860-6350
 FERGUSON METALS

2011/018
 PAGE 10/17

		AK Steel Corporation Metallurgical Test Report Coshocton Works Coshocton, OH 43812		Page 2							
		Load No. 7883163 SER No. 7883163									
CUSTOMER	FERGUSON METALS INC 3475 SYMMES ROAD HAMILTON, OH 42015		SUBMITTER FERGUSON METALS INC FERGUSON METALS INC/AERO METAL PROCESSING DIVISION T 3475 SYMMES ROAD HAMILTON, OH 45015	MILL ORDER NO. 271940-0513 PROCESSOR ORDER NO. 01008517 BUYERS ORDER NO. 01008517							
				PART NO. 11136							
				ENGLISH UNITS --PRODUCT-- METRIC UNITS 3620 NOM 36539 X COIL							
PARENT COIL ID	POS (F/T)	ENK (L, T, D)	COND	ASTM A 263 PRACTICE E	GRAIN SIZE ASTM E112	BEND 180 1T					
0686183-01B	T		ASTM	PASS	8.50	PASS					
0686183-02B	F		ASTM	PASS	8.50	PASS					

THE CHEMICAL ANALYSIS AND PHYSICAL OR MECHANICAL TESTS REPORTED ABOVE ARE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION. ALL TESTING IS DONE IN ACCORDANCE WITH ASTM STANDARDS UNLESS OTHERWISE NOTED. AK Steel Corporation 20060000 3/03	THIS CERTIFIED TEST REPORT HAS BEEN DELIVERED TO A CONSIGNEE OF MATERIAL PURCHASED FROM AK Steel Corporation. TO AVOID THE POSSIBILITY OF MISUSE ON DELIVERY OF THE REPORT TO A THIRD PARTY IT MUST BE RECEIPTED BY AND BEAR THE NAME OF SUCH CONSIGNEE. SIGNED <u>Steve Raymond</u> DATE <u>04/18/2006</u> TIME <u>2:18 PM</u> APPLICATION <u>ENGINEER</u>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Authorized Signature

 Lynne Harber

FERGUSON METALS, INC.
 This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following.
 Hamilton, OH 4501
 Bethel, CT 0686

Customer: G.F.I. INC.
 P.O.: T24965KK
 Sales: 01083756
 QTY: 1

Heat: 7360176
 Shipped: 08/08/06

Jason Murdoch

From: David Shepherd [dshepherd@dartaero.com]
Sent: Thursday, November 16, 2006 6:04 PM
To: 'Jason Murdoch'
Cc: 'L Lacelle'
Subject: RE: D2171 clamps

For the D2171 clamps, it is acceptable to use AISI 301 SS 0.063" thick per MIL S 5059.

David

From: Jason Murdoch [mailto:jmurdoch@dartaero.com]
Sent: Thursday, November 16, 2006 5:17 AM
To: 'David Shepherd'
Cc: 'L Lacelle'
Subject: D2171 clamps

Good morning Dave. I received some clamps this morning and on the supplier certs, they state that the material used was .063 S.S. 301; MIL S 5059; and also is Canadair approved spec for AMS 5516. I'm not sure if this is acceptable because I can't find it as an equivalent material.

jmurdoch@dartaero.com
Q.C. COORDINATOR

--
No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.409 / Virus Database: 268.14.6/535 - Release Date: 11/15/2006

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No virus found in this outgoing message.
Checked by AVG Free Edition.
Version: 7.1.409 / Virus Database: 268.14.6/536 - Release Date: 11/16/2006

11/17/2006